



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,460	10/02/2003	Yue S. Zhang	3054.BDG	8490

7590 04/07/2005

Charles W. Almer
National Starch and Chemical
10 Finderne Avenue
Bridgewater, NJ 08807

EXAMINER

HUANG, MEI QI

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,460

Applicant(s)

ZHANG ET AL.

Examiner

Mei Q. Huang

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 7, 16-21 and 25-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-15 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-33 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11 December 2003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of the invention of Group I, Claims 1-15 and 22-24, wherein the elected species is functional polyvinyl chloride and the claims readable thereon are 1-6, 8-15 and 22-24, in the reply filed on March 14, 2005 is acknowledged. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7, 16-21, and 25-33 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Objections

1. Claims 10 and 11 are objected to because of the following informalities: It is suggested that the claims be amended to recite "... polymer is comprised in an amount from about ..." Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1713

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 8-10, 12-15, and 22-24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Levy (US Pat. 3,875,090).

The prior art to Levy discloses a coating composition divided into two components: a functional polymer component and a urethane prepolymer component (column 2, line 13-15). As to Claim 1, Levy teaches that the polymeric resins in the functional polymer component comprise a partially hydrolyzed vinyl chloride-vinyl acetate copolymer and an alkyd resin wherein the vinyl chloride-vinyl acetate copolymer has been partially hydrolyzed to convert some of the combined vinyl acetate groups to vinyl alcohol groups (column 2, line 40-45). Levy further teaches that the invention comprises a *self-priming* polyvinyl chloride-acetate based polyurethane coating composition (column 1, line 67, and column 2, line 1-2) and by virtue of the hydroxyl functionality of the vinyl alcohol groups of the copolymer, a reaction occurs between the hydroxyl groups and some of the isocyanate groups of the urethane prepolymer to form

urethane bonds (column 5, line 45-50). Levy discloses the functional polymer component as a separately and distinguishably identified intermediate and it is substantially identical to the claimed primer composition. Therefore, it is the examiner's position to believe that the prior art functional polymer component must inherently possess the same characteristic, such as a capability of being used as a primer. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to Claims 2-4, the rejection made for Claim 1 described above in this office action would be applied herein to reject Claims 2-4.

As to Claim 5, Levy teaches that useful molecular weights of the vinyl copolymer component ranges from 5,000 to 25,000 (column 5, line 44-45), which is within the applicant's claimed molecular weight range of more than 1,000. Levy does not specify the requirement for T_g . However, given the substantial identity in the composition between the prior art and the present invention as discussed previously in this office action, it is the examiner's position to believe that the prior art functional polymer component must inherently possess the same T_g . Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to Claims 6 and 8, the rejection made for Claim 1 described above in this office action would be applied herein to reject Claims 6 and 8.

As to Claims 9-10, Levy teaches that the functional vinyl chloride copolymer is comprised, in the functional polymer component, in an amount of 23.7 parts by weight per 100 parts by weight of the functional polymer component (column 7, line 51-68), which is within applicant's claimed range of 0.5 to 75 weight %.

As to Claim 12, Levy teaches, in one of the embodiments, that an additive, such as titanium dioxide pigment, is added to the functional polymer component (column 7, line 55-56).

As to Claim 13, Levy does not disclose that the functional polymer component is water-based. However, given the substantial identity in the composition between the prior art and the present invention as discussed previously in this office action, it is the examiner's position to believe that the prior art functional polymer component must inherently possess the same characteristic, such as being used as a water-based composition. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to Claims 14 and 15, Levy teaches that solvents are preferably added to the functional polymer component (column 3, line 16-17), such solvent as methyl ethyl ketone, methyl isobutyl ketone, methyl amyl ketone, xylene, toluene, ethyl acetate, and mixture thereof (column 3, line 33-42).

As to Claims 22-24, it is the examiner's position to treat these claims as an intended use of the composition. The recitation of a new intended use for an old product does not make a claim to be product patentable. See *in In re Schreiber*, 128F. 3d 1473, 1477, 44 USPQ 1429, 1431 (Fed. Cir. 1997).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levy (US Pat. 3,875,090).

The discussion of the prior art to Levy on Claim 1 is presented in paragraph 4 previously in this office action and is incorporated herein by reference. Levy's weight percentage for the functional polymer is off from the range required by the instant claim 11. However, since applicant has not demonstrated the criticality of this specific weight range, the selection of the weight around the prior art weight range is *prima facie* obvious in the absence of new or unexpected results. *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mei Q. Huang whose telephone number is (571) 272-3549. The examiner can normally be reached on 8am - 4pm, Mon. - Fri..

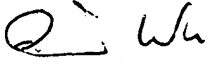
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mei Q. Huang
Patent Examiner

March 31, 2005


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700